Avid Unity™ MediaNetwork

Media Server Setup Guide

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Using This Guide

Congratulations on your purchase of a MediaNetwork Media Server. You can connect the Media Server to a Trilligent™ Cluster or to a MediaNetwork workgroup. You use the Media Server to stream video and audio files to your in-house network or to the Internet.

Your Media Server, Trilligent Cluster, or MediaNetwork workgroup might not contain all of the components or features described in the documentation. Avid® documentation describes all components and features regardless of which configuration you purchased.

Who Should Use This Guide

This guide is intended for qualified Avid Field Support personnel or Avid Resellers who are installing, configuring, or maintaining a Media Server that is part of a Trilligent Cluster or a MediaNetwork workgroup.

About This Guide

This guide is organized as follows:

- Chapter 1, “Installing the Media Server Hardware,” describes how to install and connect a Media Server to a Trilligent Cluster or to a MediaNetwork workgroup.
- Chapter 2, “Installing the Media Server Software,” describes how to install and configure the Media Server software.
- Chapter 3, “Configuring the Media Server As an FTP Server,” describes how to configure a Media Server for FTP, allowing files to be uploaded into specified folders.

- Chapter 4, “Installing the Load–Balancing Network Switch,” describes how to install and configure a load-balancing network switch that you purchased from Avid.
- Chapter 5, “Installing the Network Routing Switch,” describes how to install and configure a network routing switch that you purchased from Avid.
- Appendix A, “Media Server Specifications,” provides the dimensions and weight, and the environmental, the electrical, and the power cord specifications for the Media Server.
- Appendix B, “Regulatory and Safety Notices,” provides regulatory and safety notices for the Media Server hardware.

Symbols and Conventions

All of the material in this document applies to the Windows® 2000 operating system.

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.

Symbol or Convention	Meaning or Action
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.
▶	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.
⌘	This symbol represents the Apple or Command key. Press and hold the Command key and another key to perform a keyboard shortcut.
Margin tips	In the margin, you will find tips that help you perform tasks more easily and efficiently.
Italic font	Italic font is used to emphasize certain words and to indicate variables.
`Courier Bold font`	Courier Bold font identifies text that you type.
Click	Quickly press and release the left mouse button (Windows) or the mouse button (Macintosh).
Double-click	Click the left mouse button (Windows) or the mouse button (Macintosh) twice rapidly.
Right-click	Quickly press and release the right mouse button (Windows only).
Drag	Press and hold the left mouse button (Windows) or the mouse button (Macintosh) while you move the mouse.
Ctrl+*key* ⌘+*key*	Press and hold the first key while you press the second key.

If You Need Help

If you are having trouble using the MediaNetwork Media Server:

1. Retry the action, carefully following the instructions given for that task in this guide. It is especially important to check each step of your workflow.
2. Check the release notes supplied with your Avid application for the latest information that might have become available *after* the hardcopy documentation was printed.
3. Check the documentation that came with your Avid application or your hardware for maintenance or hardware-related issues.
4. Visit the online Knowledge Center at www.avid.com/support. Online services are available 24 hours per day, 7 days per week. Search this online Knowledge Center to find answers, to view error messages, to access troubleshooting tips, to download updates, and to read/join online message-board discussions.
5. For Technical Support, please call 800-800-AVID (800-800-2843).

   For Broadcast On-Air Sites and Call Letter Stations, call 800-NEWSDNG (800-639-7364).

Related Information

The following documents provide more information about the MediaNetwork Media Server:

- *Avid Unity MediaNetwork Site Preparation Guide*
- *Avid Unity MediaNetwork File Manager Setup Guide*
- *Avid Unity MediaNetwork Upgrade Notes*
- *Avid Unity MediaNetwork System Overview*
- *Avid Unity MediaNetwork Management Guide*
- *Avid Unity MediaNetwork Troubleshooting Guide*
- *Avid Unity MediaNetwork Macintosh Fibre Channel Client Setup Guide*

- *MediaNetwork Macintosh Fibre Channel Client Quick Start Card*
- *Avid Unity MediaNetwork Windows Fibre Channel Client Setup Guide*
- *MediaNetwork Windows Fibre Channel Client Quick Start Card*
- *Avid Unity MediaNetwork Macintosh Ethernet Client Setup Guide*
- *MediaNetwork Macintosh Ethernet Client Quick Start Card*
- *Avid Unity MediaNetwork Windows Ethernet Client Setup Guide*
- *MediaNetwork Windows Ethernet Client Quick Start Card*
- *Avid Unity MediaNetwork Release Notes*
- *Avid Unity MediaNetwork LANserver Setup Guide*
- *Avid Unity MediaNetwork PortServer Setup Guide*
- *Avid Unity MediaNetwork Supported Configurations*

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Chapter 1

Installing the Media Server Hardware

This chapter describes how to install and connect a Media Server to a Trilligent Cluster or to a MediaNetwork workgroup. In a Trilligent Cluster, you can connect up to 20 Media Servers to the MediaNetwork storage. In a MediaNetwork workgroup, you can connect up to 2 Media Servers to the MediaNetwork storage.

Before you start the procedures in this chapter, you should have already installed the File Manager and the storage for your Trilligent Cluster or MediaNetwork workgroup.

Topics in this chapter include:

- Before You Begin
- Installing the Media Server
- Connecting the Media Server Cables

Before You Begin

Keep the shipping boxes that come with your Windows client. You might need to repackage and ship the components in the future.

Before you begin to install the Media Server, do the following:

- Unpack the Media Server kit.
- Check the contents of the Media Server kit against the packing sticker on the outside of the shipping box to confirm you have received all the components.

After you unpack your Media Server kit, make sure the kit contains:

- One Media Server with a 2-Gb optical Fibre Channel adapter board and a Gigabit Ethernet adapter board
- One of the following:
  - One optical SFP (small form-factor pluggable) connector
  - One optical GBIC (gigabit interface converter) connector
- One Media Server software kit containing:
  - The *Avid Unity MediaNetwork Media Server Setup Guide*
  - The *MediaNetwork Windows Fibre Channel Client Quick Start Card*
  - The Avid Unity MediaNetwork software CD-ROM

Avid does not supply an optical cable with the Media Server client kit. You must supply the cable separately.

Installing the Media Server

The Media Server allows you to stream media files to your in-house network or to the Internet. It receives requests to stream the files and works with the File Manager to locate the files on the MediaNetwork storage.

Media Servers ship with Fibre Channel adapter boards and gigabit Ethernet network boards already installed. They also have autosensing power supplies that set the voltage correctly for either 120 volts or 240 volts.

Installing the Media Server Rack-Mount Rails

Follow the instructions supplied in the rail kit to install the Media Server rack-mount rails ensuring that:

- The rails do not interfere with the power strips, power cords, or other cables at the back of the rack.
- The bottom of the Media Server is at the bottom of a U-alignment space.
- The rails allow the Media Server to slide completely into the rack.

Connecting the Media Server Power Cord

To connect the Media Server power cord:

1. Plug one end of the power cord into the top power connector on the back of the Media Server.
2. Plug the other end of the power cord into the left power strip on the back of the rack.
3. If the Media Server has a second power supply, plug the end of another power cord into the bottom power connector on the back of the Media Server.
4. Plug the other end of the second power cord into the right power strip on the back of the rack.

Connecting the Media Server Cables

You need to connect the Media Server to a standard keyboard, mouse, and monitor or to a keyboard, video, mouse switch (KVM); the MEDIASwitch; and to your network. Do one of the following:

- If you are connecting a standard keyboard, mouse, and monitor to the Media Server, continue with “Connecting a Media Server to a Standard Monitor, Keyboard, and Mouse” on page 18.
- If you are connecting a KVM to the Media Server, continue with “Connecting a Media Server to the KVM” on page 19.

Connecting a Media Server to a Standard Monitor, Keyboard, and Mouse

If you are using a standard monitor, keyboard, and mouse, you can install them on a desktop next to a rack or you can mount them on a shelf in the rack.

Installing the Shelf

If you are installing a shelf, follow the instructions supplied with the shelf, while ensuring that:

- The shelf does not interfere with the power strips, power cords, or other cables at the back of the rack.
- The shelf allows the monitor to slide completely into the rack.
- You install the rails at the nearest U-alignment location.
- The bottom of the shelf is at the bottom of a U-alignment space.

Installing the Monitor, Keyboard, and Mouse

To connect the Media Server to a monitor, keyboard, and mouse:

1. Set the monitor on the desktop or on a shelf. Route the power cord and cable to the back of the rack.
2. Plug one end of the power cord into the back of the monitor.
3. Plug the other end of the power cord into the left power strip on the back of the rack.
4. Locate the keyboard/mouse Y-cable in the Media Server kit. Plug the single-end into the keyboard/mouse port on the back of the Media Server.
5. Attach the right branch of the connector on the Y-cable to the keyboard.
6. Attach the left branch of the connector on the Y-cable to the mouse.

When connecting the Y-cable, you determine left and right by looking at the back of the File Manager. Be sure to connect the Y-cable with the mouse on the left and the keyboard on the right.

Connecting a Media Server to the KVM

To connect the Media Server to a KVM:

1. Locate a KVM cable in the kit. It has a 25-pin connector on one end and a 9-pin connector, a keyboard connector, and a mouse connector on the other end.
2. Attach the 25-pin connector to a free port on the back of the KVM. Secure the connector with the thumbscrews in the connector.
3. Attach the 9-pin connector to the video port on the back of the File Manager. Secure the connector with the thumbscrews in the connector.
4. Locate the keyboard/mouse Y-cable in the Media Server kit. Plug the single-end into the keyboard/mouse port on the back of the Media Server.
5. Attach the right branch of the connector on the Y-cable to the keyboard connector.
6. Attach the left branch of the connector on the Y-cable to the mouse connector.

When connecting the Y-cable, you determine left and right by looking at the back of the File Manager. Be sure to connect the Y-cable with the mouse on the left and the keyboard on the right.

Connecting a Media Server to the MEDIASwitch

To connect a Media Server to the MEDIASwitch:

1. Locate the optical cable. Look for a cable with a dual plug on one end (see Figure 1).
2. Make sure the cable has an LC (small) optical cable connector to match the connector on the Fibre Channel adapter board. If the connector is not the correct one, contact your optical cable installer to arrange for them to change the connector.
3. Remove the protective covers from the optical cable connector on the optical cable.
4. Remove the protective cover from the Fibre Channel adapter board on the Media Server.

5. Plug the optical cable connector into the Fibre Channel adapter board connector. The optical cable connector and the Fibre Channel adapter board connector are keyed and fit together only *one way*. You should hear a click when the optical cable is properly seated (see Figure 1).

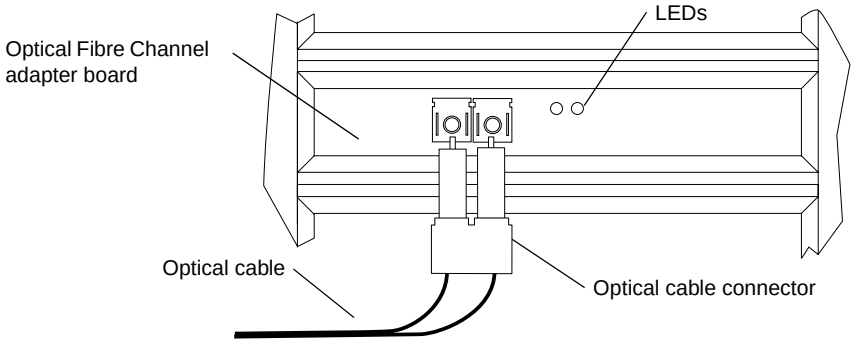


Figure 1 Attaching an Optical Cable to the Fibre Channel Adapter Board

6. Attach the other end of the optical cable to the MEDIASwitch as described in “Connecting Cables to the MEDIASwitch” on page 20.

Connecting Cables to the MEDIASwitch

The MEDIASwitch connects the Trilligent Cluster or MediaNetwork workgroup to several Media Servers. The switch allows the Media Servers to use the storage simultaneously. The switch prevents work interruptions by allowing other clients in the workgroup to continue working if one or more clients goes offline.

Avid supports two types of MEDIASwitches: 1-Gb MEDIASwitches and 2-Gb MEDIASwitches. The 1-Gb MEDIASwitch uses optical GBIC connectors to connect the cables to the switch. The 2-Gb MEDIASwitch uses SFP connectors to connect the cables to the switch.

Connecting to a 1-Gb MEDIASwitch

Use the following procedure to correctly connect an optical GBIC and optical cable to a 1-Gb MEDIASwitch.

To connect an optical cable to the 1-Gb MEDIASwitch:

1. Locate the optical GBIC in the Media Server kit.
2. Route the optical cable from the Media Server to the MEDIASwitch, if it has not been installed already.
3. Position the optical GBIC in front of a MEDIASwitch port (see Figure 2). Make sure the optical cable connector is facing *away* from the MEDIASwitch.

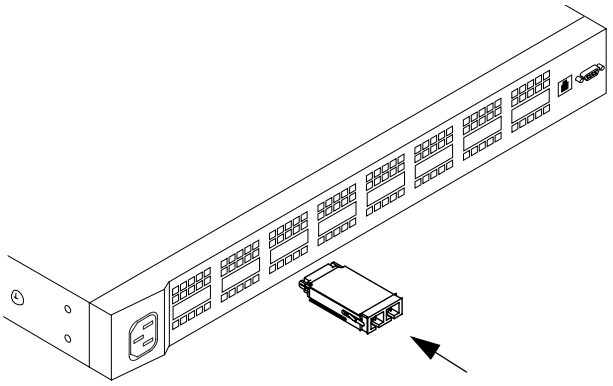


Figure 2 Installing a GBIC Connector

You can install the GBIC while the MEDIASwitch is turned on.

4. Slide the optical GBIC into the MEDIASwitch port. You should hear the retainer clips click when the optical GBIC is seated in the port.
5. Remove the protective covers from the optical cable connector on the optical cable.

6. Remove the protective cover from the optical GBIC in the MEDIASwitch.
7. Attach the connector on the optical cable into the optical GBIC for the Media Server (see Figure 3). Firmly push the plug on the optical cable into the connectors on the optical GBIC.
8. Label the optical cable with the name or location of the Media Server to which it connects.

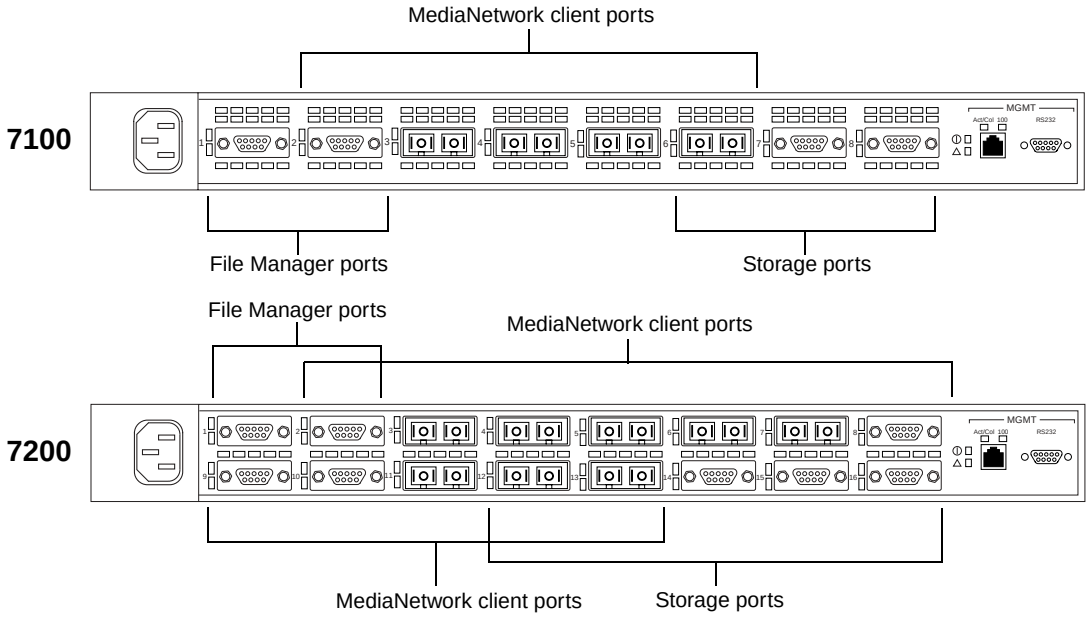


Figure 3 Port Layout for 1-Gb MEDIASwitches

Connecting to a 2-Gb MEDIASwitch

Use the following procedure to correctly connect an optical SFP and optical cable to a 2-Gb MEDIASwitch.

To connect an optical cable to the 2-Gb MEDIASwitch:

1. Locate the optical SFP in the Media Server kit.
2. Route the optical cable from the Media Server to the MEDIASwitch, if it has not been installed already.
3. Position the optical SFP in front of a MEDIASwitch port (see Figure 4). Make sure the optical cable connector is facing *away* from the MEDIASwitch.

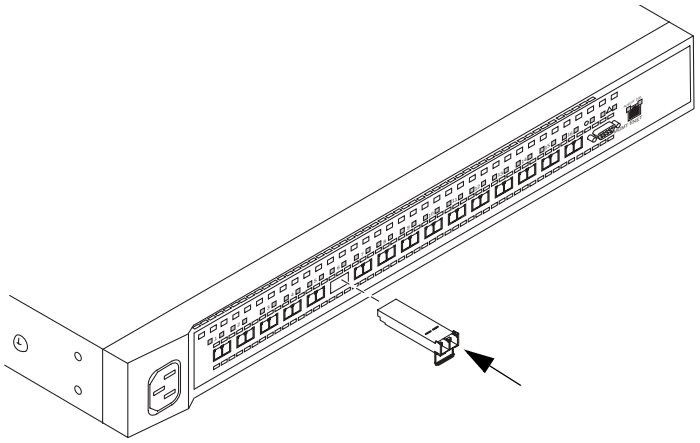


Figure 4 Installing an SFP Connector

You can install the SFP while the MEDIASwitch is turned on.

4. Slide the optical SFP into the MEDIASwitch port. You should hear a click when the optical SFP is seated in the port.
5. Remove the protective covers from the optical cable connector on the optical cable.
6. Remove the protective cover from the optical SFP in the MEDIASwitch.

7. Attach the connector on the optical cable into the optical SFP for the Media Server (see Figure 5). Firmly push the plug on the optical cable into the connectors on the optical SFP.
8. Label the optical cable with the name or location of the Media Server to which it connects.

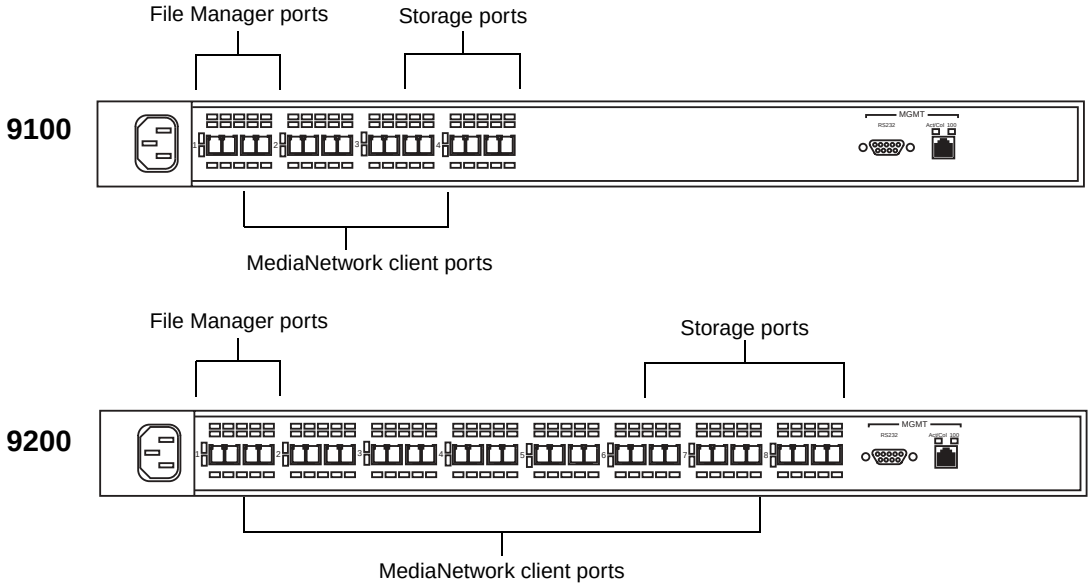


Figure 5 Port Layout for 2-Gb MEDIASwitches

Chapter 2

Installing the Media Server Software

This chapter describes how to install and configure the appropriate software on a Media Server to make it function in a Trilligent Cluster or a MediaNetwork workgroup. Installing the necessary software is a multistep process; make sure you complete the following sections in sequential order.

Before you start the procedures in this chapter, you should have already:

- Installed the File Manager and the storage for your Trilligent Cluster or MediaNetwork workgroup
- Installed the Media Servers
- Properly configured your Trilligent Cluster or MediaNetwork workgroup storage with at least one workspace accessible to the Media Servers

Topics in this chapter include:

- Setting Up a Media Server
- Configuring a Media Server

Setting Up a Media Server

To set up a Media Server in a Trilligent Cluster or a MediaNetwork workgroup, perform all of the operations in the following sections on each Media Server.

Quick Summary

If you are familiar with configuring Windows 2000 Server systems, you can skip the detailed instructions in this chapter and perform the steps outlined here.

- Check that the Media Server is running the Windows 2000 Server with Service Pack 2. If it is not, install it.
- Check that the Media Server has the necessary Windows 2000 hotfixes installed. If they are not present, then install the hotfixes.
- Set the date, time, and time zone.
- Configure the IP addresses and, if necessary, the gateway IP addresses for the network adapters.
- Configure 768 MB to 1536 MB of virtual memory on drive D:.

Checking the Operating System

The Media Server uses the Windows 2000 Server operating system and Service Pack 2 to manage network requests and to stream media files. The Media Server uses the default Windows 2000 Server installation that comes preinstalled on the system's hard drive.

Avid ships the Media Server with the Windows 2000 Server, Service Pack 2, and the necessary hotfixes preinstalled. If you are performing a new installation, continue with "Installing the Media Server Software" on page 32. If you are concerned that the operating system might not be properly installed, you can check it by following the procedures in this section.

To determine the version of the Windows 2000 operating system installed on the Media Server:

1. Right-click the My Computer icon on the desktop, and select Properties. The System Properties dialog box opens.
2. Look at the System area, which contains the Windows version and the service pack version that are installed on the Media Server. You should see Windows 2000 and Service Pack 2.
3. Close the System Properties dialog box.
4. Click the Start button, and select Settings > Control Panel. The Control Panel window opens.
5. Double-click the Add/Remove Programs icon. The Add/Remove Programs window opens showing the Installed Software list.
6. Check for the WebDAVServiceProvider (Q296441) and the Service Rollup (w2kSP2SRP1) hotfixes in the Installed Software list.
7. Do one of the following:
   - If the hotfixes *do not* appear in the Installed Software list, continue with "Installing the Windows 2000 Hotfixes" on page 28.
   - If the hotfixes *do* appear in the Installed Software list, continue with "Installing the Media Server Software" on page 32.

If your Media Server does not have the Windows 2000 Server operating system, Service Pack 2, or necessary hotfixes installed, install the missing components.

The Windows 2000 operating system CD-ROM is provided in the Media Server kit. Service Pack 2 is provided on the MediaNetwork CD-ROM in the \Extras\ServicePacks\Win2k folder. The hotfixes are provided on the CD-ROM in the \Extras\HotFixes\Win2k folder.

If you reinstall the Windows 2000 operating system, make sure you perform a default installation (accept all the standard installation recommendations) of the Windows 2000 Server operating system. Follow the Windows 2000 installation instructions that came with your Media Server.

Installing the Windows 2000 Hotfixes

You need to install the correct hotfixes on a Media Server to improve system stability and performance. For the best results, install the hotfixes from the folders in the following order:

- WebDAVServiceProvider (Q296441)
- Service Rollup (w2kSP2SRP1)

To install the WebDAVServiceProvider hotfixes:

1. Navigate to \Extras\HotFixes\Win2k\Professional \WebDAVServiceProvider on the MediaNetwork CD-ROM.
2. Double-click the Q296441_W2K_SP3_x86_en.exe file. The Windows 2000 Hotfix Setup dialog box opens when the installation is complete.
3. Click OK to finish the installation.
4. Reboot the Media Server.

To install the Service Rollup hotfixes:

1. Navigate to \Extras\ServicePacks\Win2k\Professional\ on the MediaNetwork CD-ROM.
2. Double-click the w2kSP2SRP1.exe file. The Windows 2000 Hotfix Setup dialog box opens when the installation is complete.
3. Click OK to finish the installation.
4. Reboot the Media Server.

Setting the Date, Time, and Time Zone

You need to correctly set the date, time, time zone, and Daylight Saving Time options on each Media Server. This allows the “Synchronize time with File Manager” function on the Media Server to work correctly.

To set the date, time, time zone, and Daylight Saving Time options on a Media Server:

1. Double-click the time in the taskbar. The Date/Time Properties dialog box opens.
2. Set the date and time using the Date & Time tab.
3. Click the Time Zone tab.
4. Set the time zone for the location of the Media Server. By default, Windows 2000 sets the time zone to "(GMT - 8:00) Pacific Time (US & Canada), Tijuana."
5. Select the "Automatically adjust clock for daylight saving changes" option if your location observes Daylight Saving Time.
6. Click OK to close the Date/Time Properties dialog box and save the settings.
7. Reboot the Media Server.

Configuring the Network Properties

You need to configure the Media Server's network properties so it can communicate with the network. The Media Server typically has four network connections: two built-in 10/100BASE-T adapters, a gigabit (1000BASE-T) adapter, and an MS loopback adapter (disabled). At minimum, you need to provide an IP address for the gigabit adapter. If you plan to connect the Media Server to a management hub or another network, you'll also need to provide IP addresses for the two built-in adapters.

To configure the network properties for a Media Server:

1. Right-click the My Network Places icon on the desktop, and select Properties. The Network and Dial-up Connections window opens.
2. Right-click the 10/100BASE-T or 1000BASE-T adapter icon you want to configure from the list. From the pop-up menu, select Status. The adapter's Status dialog box opens.
3. Click the Properties button. The adapter's Properties dialog box opens.
4. Click the General tab.
5. Click Internet Protocol (TCP/IP).

6. Click the Properties button. The Internet Protocol (TCP/IP) Properties dialog box opens.
7. Select the “Use the following IP address” option.
8. Type an appropriate IP address in the IP Address text box, and press Enter. The Media Server should fill in the subnet mask automatically. If not, type the subnet mask in the Subnet Mask text box.
9. If necessary, type a gateway IP address in the Default Gateway IP Address text box.
10. If necessary, type a DNS server IP address in the Preferred DNS server text box.
11. If necessary, type an alternate DNS server IP address in the Alternate DNS server text box.
12. Click OK to set the changes.
13. Click OK to close all of the open dialog boxes.
14. Close the Network and Dial-up Connections window.
15. Click the Start button, and select Shut Down. The Shut Down Windows dialog box opens.
16. Click the pop-up menu, and select Restart.
17. Click OK to reboot the Media Server. The Media Server restarts with its new IP address.

Setting Virtual Memory

Virtual memory extends the physical memory (RAM) in your Media Server using a portion of the hard drive as a location where you can move unused data from physical memory.

Avid ships the Media Server with virtual memory already configured. If you are installing a new Media Server, continue with “Installing the Media Server Software” on page 32. If you are rebuilding the Media Server, then set the virtual memory.

The Media Server requires you to allocate from 768 MB to 1536 MB of virtual memory on drive D:.

To set the virtual memory size:

1. Right-click the My Computer icon on the desktop, and select Properties. The System Properties dialog box opens.
2. Click the Advanced tab. The Advanced Settings dialog box opens.
3. Click the Performance Options button. The Performance Options dialog box opens.
4. Click the Change button. The Virtual Memory dialog box opens.
5. Select D: in the Drive [Volume Label] list.
6. Double-click in the Initial size (MB) text box and type **768**.
7. Double-click in the Maximum size (MB) text box and type **1536**.
8. Click the Set button.
9. Select C: in the Drive [Volume Label] list.
10. Double-click in the Initial size (MB) text box and type **0**.
11. Double-click in the Maximum size (MB) text box and type **0**.
12. Click the Set button.
13. Click OK to close the Virtual Memory dialog box.
14. Click OK to close the Performance Options dialog box
15. Click OK to close the System Properties dialog box.
16. Click the Start button, and select Shut Down. The Shut Down Windows dialog box opens.
17. Click the pop-up menu, and select Restart.
18. Click OK to reboot the Media Server. The new virtual memory size takes effect after the restart is complete.

Configuring a Media Server

A Media Server requires software for it to communicate with the File Manager and to stream media files to an in-house network or to the Internet. The following sections describe how to install and configure your Media Server.

Installing the Media Server Software

The Media Server software allows the Media Server to communicate with the File Manager, and to access the files that are on the Trilligent Cluster or MediaNetwork workgroup storage. This software is supplied on the MediaNetwork CD-ROM in the Media Server kit.

To install the Media Server software:

1. Locate the MediaNetwork CD-ROM.
2. Insert the CD-ROM into the Media Server CD-ROM drive. The CD-ROM is set to automatically start and open the Avid Unity Installation window. This takes approximately 30 seconds.

   If the CD-ROM does not automatically start, then start the installation manually as follows:

   a. Double-click the My Computer icon on the desktop. The My Computer window opens.

   b. Right-click the CD-ROM icon, and select AutoPlay. The Avid Unity Installation window opens.
3. Click Product Installers. The screen lists the available products.
4. Do one of the following

   - If you are installing the Media Server in a Trilligent Cluster, click Trilligent Components. The screen lists the available Trilligent Cluster installers.
   - If you are installing the Media Server in a MediaNetwork workgroup, click MediaNetwork Components. The screen lists the available MediaNetwork workgroup installers.

5. Click Install Media Server. The InstallShield Wizard opens to the Welcome screen.
6. Accept the default values presented by the InstallShield Wizard. The Setup Status screen opens, showing the installation progress indicator while the software is being installed.
7. When the InstallShield Wizard Complete screen opens, click the "Yes, I want to restart my computer now" option.
8. Click Finish to complete the Media Server software installation and reboot the Media Server.

Mounting Workspaces on the Media Server

You map Trilligent Cluster and MediaNetwork workgroup workspaces to specific drive letters using the AISPortServer.ini file. This maintains a relationship among streaming server mount points, FTP virtual directories, and mapped drives.

You must mount at least one workspace that can be used as the mount point for either the Windows Media Services software or the Real Server software. Workspace names are case sensitive and can contain no spaces.

To configure the AISPortServer.ini file:

1. Navigate to D:\Program Files\Avid Technology\AvidUnity\PortServerStartup.
2. Open the AISPortServer.ini file using a text editor, such as WordPad.
3. Add one line for each workspace you want to map to a specific drive letter. Each line should be in the format *X: workspace*, where *X* is the drive letter and *workspace* is the name of the workspace you want to mount. Workspace names are case sensitive and can contain no spaces. Your file might have entries that look like the example on the following page.

```
# To mount a specific workspace using a fixed drive letter, add one line
# for each workspace in the following format:
#
#U: Workspace name
#G: Workspace1
#H: Workspace2
# The remaining available drive letters will be used to mount other workspaces,
# in alphabetical order, up to the maximum of 21 workspaces.
#
```

4. Save the AISPortServer.ini file.
5. Reboot the LANserver to mount the workspaces typed into the AISPortServer.ini file.

Installing the Windows Media Services Software

Avid ships Media Servers with Windows Media™ Services preinstalled. If you are installing a new Media Server, you can skip this section. If you are rebuilding the Media Server, then install Windows Media Services.

You can use Windows Media Services software to stream media files to the Internet. To install Windows Media Services, follow the instructions provided with the software.

If you plan to use both the Windows Media Services software and the Real Server software to stream media files, you must install them on separate Media Servers. You *cannot* run both software packages on the same Media Server.

Configuring the Windows Media Technology Software

This procedure is a high-level overview only. For more information, see the Windows Media Technology Administration Help.

To configure the Windows Media Services software:

1. Start the Windows Media Technology Administration interface.
2. Select Unicast Publishing Point and map a virtual root (<VROOT>) to a Trilligent Cluster or a MediaNetwork workgroup workspace you have created to store your Windows Media files.
3. Test that the Unicast Publishing Point is correctly mapped:
   a. Copy a sample ASF file from <ASFROOT> to the Trilligent workspace.
   b. Click the Start button, and select Run. The Run dialog box opens. Play the ASF file by typing its URL (for example, **MMS://127.0.0.1/*VROOT/SAMPLE.ASF)*** in the Open text box, and click OK.

Replace the SAMPLE.ASF file in the example above with the name and type of file you want to run.

Installing the Real Server Software

You can use Real Server software to stream media files to the Internet. To install Real Server, follow the instructions provided with the software.

Configuring the Real Server Software

This procedure is a high-level overview only. For more information, see the Real Server Administrator Help.

To configure the Real Server software:

1. Start Real Server Administrator.
2. Navigate to Mount Points.

3. Add a Mount Point, rename it, and map its Base path to a Trilligent workspace you have created to store your RealMedia™ files.
4. Apply your changes and restart the Media Server.
5. When the Media Server restarts, test that the Mount Point is correctly mapped:
   a. Copy a sample RealMedia file to the Trilligent workspace.
   b. Click the Start button, and select Run. The Run dialog box opens. Play the RealMedia file by typing its URL (for example, **`MMS://127.0.0.1/VROOT/SAMPLE.ASF)`** in the Open text box, and click OK.

Replace the SAMPLE.ASF file in the example above with the name and type of file you want to run.

Chapter 3

Configuring the Media Server As an FTP Server

You might want to set up a Media Server as an FTP server. This allows you to upload media files into designated workspaces from remote systems. The FTP server uses Microsoft's Internet Information Server (IIS) for the file uploads.

Before you start the procedures in this chapter, you should have already:

- Installed the File Manager, the storage, and at least one Media Server
- Configured the Media Server to mount at least one Trilligent Cluster or MediaNetwork workspace

Configuring the Internet Information Server for FTP

Avid ships the Media Server with the IIS already installed, but disabled. If you are installing a new Media Server, continue with "Configuring the FTP Server Software" on page 38. If you are rebuilding the Media Server, continue with "Installing the FTP Server Software" on page 37.

Installing the FTP Server Software

Use the following procedure to correctly install the IIS on the Media Server you are rebuilding.

To install the IIS for FTP:

1. Locate the Windows 2000 Server CD-ROM and manual that came in your Media Server kit.
2. Insert the CD-ROM into the Media Server CD-ROM drive.
3. Follow the instructions in the Windows 2000 Server manual to install the FTP server software.

Configuring the FTP Server Software

Use the following procedure to correctly configure the IIS on the Media Server you are installing.

To configure the IIS for FTP:

1. Start the IIS management interface and create a virtual FTP root called Trilligent or MediaNetwork in the default FTP site.
2. Map the virtual root to one of the following:
   - The workspace you defined earlier as the Unicast Publishing Point for the Windows Media Services software
   - The workspace you defined earlier as the Mount Point for the Real Server software
3. Assign the Read, Write, and Execute permissions to the FTP root. (Write permission allows the user to upload files from remote systems.)
4. In the FTP properties, deselect the “Anonymous access only” option in the properties of the default FTP site.
5. Start the Windows 2000 User Manager and create the necessary user accounts for FTP login. Make sure these accounts have the “user can login locally” permission.
6. Assign each FTP user a separate directory on the Media Server. Create a virtual root for each user, using *the same name* as the Windows 2000 account you created for the user’s FTP login.

Chapter 4

Installing the Load–Balancing Network Switch

This chapter describes how to install and configure a Foundry Networks® ServerIron™ load-balancing (Layer 4) network switch.

Before you start the procedures in this chapter, you should have already:

- Installed the File Manager, the storage, and at least one Media Server
- Configured the Media Server to mount at least one Trilligent Cluster or MediaNetwork workspace
- Set up a Media Server as an FTP server, if desired

Topics in this chapter include:

- Installing the ServerIron Switch
- Connecting a Media Server to the ServerIron Switch
- Configuring the MS Loopback Adapter
- Configuring the ServerIron Switch
- Advanced ServerIron Switch Configuration

Installing the ServerIron Switch

To install the ServerIron switch:

1. Unpack the switch and its mounting hardware.
2. Attach the mounting brackets to each side of the front of the switch, using the screws supplied with the switch.
3. Slide the switch into the rack and locate it at the bottom of a U-alignment space.

The load-balancing switch is only 1.75 U deep. Therefore, you might have to align the switch in the middle of a 2 U rack space. This will leave approximately a 1/4-inch gap above and below the switch when it is aligned correctly.

4. Attach the switch to the rack rails, using the screws supplied with the switch.

Connecting a Media Server to the ServerIron Switch

To connect a Media Server to the load-balancing network switch:

1. Locate an Ethernet cable in the Media Server kit. This cable can be either a standard 10/100BASE-T Category 5 cable with RJ-45 connectors on the ends or an optical cable for gigabit (1000BASE-T) Ethernet. Check the Ethernet adapter board in the top slot on the back of the Media Server to determine the type of cable you need.
2. Connect one end of the cable to the Ethernet adapter board.
3. Connect the other end of the cable to the load-balancing network switch.

Configuring the MS Loopback Adapter

If your Trilligent Cluster includes a Foundry Networks load-balancing (Layer 4) network switch, you need to configure the MS loopback adapter on each Media Server.

To configure the MS loopback adapter:

1. Right-click the My Network Places icon on the desktop, and select Properties. The Network and Dial-up Connections window opens.
2. Locate the Loopback Adapter icon.
3. Right-click the Loopback adapter icon, and select Properties. The Loopback Adapter Properties dialog box opens.
4. Click the General tab.
5. Click Internet Protocol (TCP/IP).
6. Click the Properties button. The Internet Protocol (TCP/IP) Properties dialog box opens.
7. Select the “Use the following IP address” option.
8. Type the virtual IP address (VIP) you are using for the load-balancing network switch in the IP Address text box.
9. Type the subnet mask in the Subnet Mask text box.

Do not set a default gateway for the loopback adapter. It will prevent streaming from the VIP.

10. Click OK to set the changes.
11. Click OK to close all of the open dialog boxes.
12. Close the Network and Dial-up Connections window.
13. Click the Start button, and select Shut Down. The Shut Down Windows dialog box opens.
14. Click the pop-up menu, and select Restart.
15. Click OK to reboot the Media Server. The Media Server restarts with its new IP address.

Configuring the ServerIron Switch

To configure the basic physical parameters for your switch:

1. Connect a PC or a laptop with HyperTerminal™ software to the management port on the ServerIron switch. You need a straight-through (null-modem) serial cable to make the connection. The cable should have a 9-pin connector on one end to be attached to the switch and a 9-pin or 25-pin connector on the other end to be attached to the PC or laptop.
2. Start HyperTerminal (see the Foundry Networks documentation supplied with your ServerIron switch for HyperTerminal configuration details). You should see the following prompt from the switch:
   ```
   ServerIron>
   ```
3. Start the command line interface at the EXEC level by typing:
   ```
   ServerIron> enable
   ServerIron#
   ```
4. Change to the CONFIG level and begin the configuration by typing:
   ```
   ServerIron# configure terminal
   ServerIron(config)#
   ```
5. Check the existing configuration by typing:
   ```
   ServerIron(config)# show configuration
   ```
6. Assign the switch a host name by typing:
   ```
   ServerIron(config)# hostname name
   ```
   where *name* is the name you want to give the switch.
7. Assign the switch an IP address by typing:
   ```
   ServerIron(config)# ip address address mask
   ```
   where *address* is the switch IP address and *mask* is the subnet mask.
8. Set the switch's default network gateway address by typing:
   ```
   ServerIron(config)# ip default-gateway address
   ```
   where *address* is the IP address of a network gateway.

9. Set the domain by typing:
   ```
   ServerIron(config)# ip dns domain-name name
   ```
   where *name* is the name of the domain where the switch is installed.
10. Set the DNS server IP address by typing:
    ```
    ServerIron(config)# ip dns server-address address
    ```
    where *address* is the IP address of the DNS server.
11. Save all the changes in memory by typing:
    ```
    ServerIron(config)# write memory
    ```
12. Return to the EXEC level by typing:
    ```
    ServerIron(config)# end
    ServerIron#
    ```

Advanced ServerIron Switch Configuration

For information on configuring the ServerIron switch to operate with your network configuration, see the Foundry Networks documentation provided with your ServerIron switch.

Chapter 5

Installing the Network Routing Switch

This chapter describes how to install and configure a Foundry Networks FastIron™ network routing (Layer 2) switch.

Before you start the procedures in this chapter, you should have already:

- Installed the File Manager, the storage, and at least one Media Server
- Configured the Media Server to mount at least one Trilligent Cluster or MediaNetwork workspace
- Set up a Media Server as an FTP server, if desired

Topics in this chapter include:

- Installing the FastIron Switch
- Connecting a Media Server to the FastIron Switch
- Configuring the FastIron Switch
- Advanced FastIron Switch Configuration

Installing the FastIron Switch

To install the FastIron switch:

1. Unpack the switch and its mounting hardware.
2. Attach the mounting brackets to each side of the front of the switch, using the screws supplied with the switch.
3. Slide the switch into the rack and locate it at the bottom of a U-alignment space.
4. Attach the switch to the rack rails, using the screws supplied with the switch.

Connecting a Media Server to the FastIron Switch

To connect a Media Server to the network routing switch:

1. Locate an Ethernet cable in the Media Server kit. This cable can be either a standard 10/100BASE-T Category 5 cable with RJ-45 connectors on the ends or an optical cable for gigabit (1000BASE-T) Ethernet. Check the Ethernet adapter board in the top slot on the back of the Media Server to determine the type of cable you need.
2. Connect one end of the cable to the Ethernet adapter board.
3. Connect the other end of the cable to the network routing switch.

Configuring the FastIron Switch

To configure the basic physical parameters for your switch:

1. Connect a PC or a laptop with HyperTerminal software to the management port on the FastIron switch. You need a straight-through (null-modem) serial cable to make the connection. The cable should have a 9-pin connector on one end to be attached to the switch and a 9-pin or 25-pin connector on the other end to be attached to the PC or laptop.
2. Start HyperTerminal (see the Foundry Networks documentation supplied with your FastIron switch for HyperTerminal configuration details). You should see the following prompt from the switch:

   ```
   FastIron>
   ```
3. Start the command line interface at the EXEC level by typing:

   ```
   FastIron> enable
   FastIron#
   ```
4. Change to the CONFIG level and begin the configuration by typing:

   ```
   FastIron# configure terminal
   FastIron(config)#
   ```
5. Check the existing configuration by typing:

   ```
   FastIron(config)# show configuration
   ```
6. Assign the switch a host name by typing:

   ```
   FastIron(config)# hostname name
   ```

   where *name* is the name you want to give the switch.
7. Assign the switch an IP address by typing:

   ```
   FastIron(config)# ip address address mask
   ```

   where *address* is the switch IP address and *mask* is the subnet mask.
8. Set the switch's default network gateway address by typing:

   ```
   FastIron(config)# ip default-gateway address
   ```

   where *address* is the IP address of a network gateway.

9. Set the domain by typing:
   ```
   FastIron(config)# ip dns domain-name name
   ```
   where *name* is the name of the domain where the switch is installed.
10. Set the DNS server IP address by typing:
    ```
    FastIron(config)# ip dns server-address address
    ```
    where *address* is the IP address of the DNS server.
11. Save all the changes in memory by typing:
    ```
    FastIron(config)# write memory
    ```
12. Return to the EXEC level by typing:
    ```
    FastIron(config)# end
    FastIron#
    ```

Advanced FastIron Switch Configuration

For information on configuring the FastIron switch to operate with your network configuration, see the Foundry Networks documentation provided with your FastIron switch.

Appendix A

Media Server Specifications

This appendix provides the dimensions and weight, and the environmental, the electrical, and the power cord specifications for the Media Server.

Dimensions and Weight

The dimensions and weight for the Media Server are as follows:

- Height — 3.46 inches (88 mm)
- Width — 16.75 inches (426 mm)
- Depth — 28.00 inches (711 mm)
- Weight — 51.0 pounds (23.1 kg)

Environmental Specifications

The environmental specifications for the Media Server are as follows:

- Operating temperature — 50°F to 95°F (10°C to 35°C)
- Operating humidity — 10% to 80% noncondensing
- Storage temperature — -40°F to 158°F (-40°C to 70°C)
- Storage humidity — 5% to 95% noncondensing

Electrical Specifications

The electrical specifications for the Media Server are as follows:

- Voltage — 115 or 230 V ac
- Frequency — 50 to 60 Hz
- Watts (Max. U.S.) — 300 W

Power Cord Specifications

Select the power cords for the Media Server according to the country destination; power cords must comply with local safety requirements.

Use the following guidelines to replace the original cord set:

- **CEE-22 requirements:** Figure 6 shows the female receptacle of the cord set, which must comply with CEE-22 requirements.

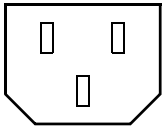


Figure 6 Receptacle (CEE-22)

- **United States and Canada requirements:** In the United States and Canada, the male plug is a NEMA 5-15P style, and is UL listed and CSA certified. Figure 7 shows the plug. You can use SVT cordage with desktop, countertop, or rack-mount units; all other equipment requires SJT cordage. You must use only SJT-type cord sets for units that sit on the floor.

Select the cord set according to the current rating of your unit. The following table lists the selection criteria for power cords in the United States, Canada, and Europe.

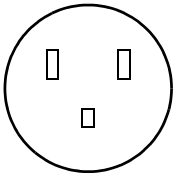


Figure 7 NEMA 5-15P Style Plug

- **European requirements:** In Europe, use only an H05VV-F, <HAR>, VDE, PVC, 3 x 1.00 mm^2 power cord. Für den Gebrauch in Deutschland muß ein Netzkabel des Typs H05VV-F, <HAR>, PVC, Größe, 3 x 1.00 mm^2 verwendet werden. The following table lists the selection criteria for power cords in the United States, Canada, and Europe.

Size of Conductors in Cord			Maximum Current Rating of Unit	
Cord Type	**U.S./Canada**	**Europe**	**U.S./Canada**	**Europe**
SJT	16 AWG	3 x 1.00 mm^2	12 A	10 A
SVT	18 AWG	NA[a]	10 A	NA
SVT	17 AWG	NA	12 A	NA

a. NA – Not applicable.

Appendix B

Regulatory and Safety Notices

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Declaration of Conformity
(According to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives:	73/23/EEC, 89/336/EEC.
Standards to which Conformity is Declared:	EN60950:1992 + A1 + A2 + A3 + A4 + A11 CISPR 22:1997 / EN55022:1994 + A1:1995 + A2:1997 Class A EN55024:1998/EN61000 — 3-2, 4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11
Manufacturer's Name:	Avid Technology, Inc. 1925 Andover Street Tewksbury, MA 01876, USA
European Contact:	Nearest Avid Sales and Service Office or Avid Technology International B.V. Sandyford Business Center Unit 3, Dublin 18, Ireland
Type of Equipment:	Information Technology Equipment

Product Name:	Products for the Windows NT, Windows 2000, or Windows XP Operating System: Avid Equinox Break-Out-Box, Avid|DS, Avid Xpress, Avid Xpress DV, Film Composer, Media Composer, MediaDock 2+, MediaDock LVD, MediaDrive, MediaRAID, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Meridien I/O box, NewsCutter, NewsCutter DV, NewsCutter XP, Symphony Products for the Mac OS X Operating System: Avid Xpress, Avid Xpress DV, Film Composer, Media Composer, MediaDock 2+, MediaDock LVD, MediaDrive, MediaRAID, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Meridien I/O box, Symphony Products for the UNIX Operating System: AirPlay, VideoSPACE Products for MediaNetwork and Workgroups: Avid ProEncode, Avid Unity MediaManager, Avid Unity MediaNetwork, Avid Unity TransferManager, LANserver, LANserver EX, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Nearchive, PortServer, Xdeck
Base Model Numbers:	None
Product Options:	All
Year of Manufacture:	2003

(1) Products for the Windows NT, Windows 2000, or Windows XP Operating System: products were tested in a typical Avid Equinox Break-Out-Box, Avid|DS, Avid Xpress, Avid Xpress DV, Film Composer, Media Composer, MediaDock 2+, MediaDock LVD, MediaDrive, MediaRAID, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Meridien I/O box, NewsCutter, NewsCutter DV, NewsCutter XP, or Symphony configuration.

(2) Products for the Mac OS X Operating System: products were tested in a typical Avid Xpress, Avid Xpress DV, Film Composer, Media Composer, MediaDock 2+, MediaDock LVD, MediaDrive, MediaRAID, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Meridien I/O box, or Symphony configuration.

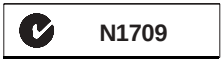
(3) Products for the UNIX Operating System: products were tested in an AirPlay or VideoSPACE configuration.

(4) Products for MediaNetwork and Workgroups: products were tested in a typical Avid ProEncode, Avid Unity MediaManager, Avid Unity MediaNetwork, Avid Unity TransferManager, LANserver, LANserver EX, MEDIArray, MEDIArray Drive, MEDIArray II, MEDIArray II Drive, Nearchive, PortServer, or Xdeck configuration.

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Director of Hardware Engineering

Australia and New Zealand EMC Regulations



John Kells, Australian Operations Manager
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Taiwan EMC Regulations

Taiwan EMC Regulations BSMI Class A EMC Warning

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。